

REMARKS

This is a full and timely response to the Office Action dated January 10, 2011.

Present Status of the Application

Claims 1-3 are rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention.

Claims 1-3 are rejected under 35 U.S.C. 103(a) as being assertedly unpatentable over Kadono et al. (US 7,327,788; hereinafter "Kadono") in view of Applicant Admitted Prior Art (hereinafter "AAPA").

After carefully considering the Office Action and the cited references, Applicants have amended claims 1 and 3 to overcome the rejections under 35 U.S.C. 101 and 103 on the following basis. Applicants respectfully submit that no new matter has been entered by way of amendment. Upon entry of the above amendment, Applicants respectfully submit that all the pending claims 1-3 are in proper condition for allowance. Withdrawal of all the rejections and allowance of all the pending claims are earnestly requested.

Response to Claim Rejections under 35 U.S.C 101

Claims 1-3 are rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention.

Applicants respectfully traverse the rejection based on the following reasons. Claim 1 is directed to a method for obtaining an image reference block in a picture in a code mode of fixed reference frame number in image encoding/decoding of digital video. The method recited in claim 1 transforms digital video from one stage to a different state via encoding/decoding of the digital video. The method of claim 1 further recites the formulas:

$$MV_F = \frac{tb}{td} \times MV$$
$$MV_B = \frac{tb - td}{td} \times MV$$

here, tb is a distance in time domain between a current picture and a forward reference picture, and td is a distance in time domain between a forward reference picture and a backward reference picture. In claim 1, tb, td, MV are tied to distance in time domain and picture, respectively. Therefore, that said method is tied to another statutory category (such as a video player) and transforms underlying subject matter (encodes/decodes digital video).

Applicants thereby respectfully submit that claim 1 and claims 2-3 dependent therefrom are directed to patentable subject matter as required by 35 U.S.C. 101 and respectfully request withdrawal of the rejections under 35 U.S.C. 101.

Response to Claim Rejections under 35 U.S.C 103

Claims 1-3 are rejected under 35 U.S.C. 103(a) as being assertedly unpatentable over Kadono and AAPA

In response thereto, Applicants have amended claims 1 and 3 to respectfully traverse said rejections on the grounds set forth in detail below.

It is submitted that Kadono fails to disclose the claimed feature of “discriminating whether a reference frame corresponding to the motion vector is beyond a maximum forward reference frame which is pointed by the B frame.”

In Kadono, the step of “judging whether the first parameter is a value within a predetermined range or not” is different from the claimed step of “discriminating whether a reference frame corresponding to the motion vector is beyond a maximum forward reference frame which is pointed by the B frame” in the following aspects. In one aspect, the first parameter provided by Kadono is a value corresponding to a distance between a picture which has the reference motion vector and a picture which is referred to, but the claimed reference frame corresponding to the motion vector is the reference frame pointed by the backward reference frame. In another aspect, the predetermined range provided by Kadono is the difference in time information between the forward picture and the backward picture which can be set freely (paragraph [0068]), but the value that should be compared with the reference frame corresponding to the motion vector in claim 1 is the maximum forward reference frame which is pointed by the B frame. In still another aspect, the aim of using a predetermined value suggested by Kadono is to reduce the amount data on a multiplier parameter table stored in a memory, but

the aim of “discriminating whether a reference frame corresponding to the motion vector is beyond a maximum forward reference frame which is pointed by the B frame” in claim 1 is to judge whether the reference frame pointed by the backward reference frame can be pointed by the B frame or not; if yes, the maximum forward reference frame to which the B frame can point to is used to substitute the reference frame pointed by the backward reference frame in real, so as to solve the problem that the B frame cannot obtain the image reference block when it is out of the scope, so as to guarantee the coding efficiency to the largest extent.

Based on the above three aspects, it can be seen that Kadono fails to disclose the claimed step of “discriminating whether a reference frame corresponding to the motion vector is beyond a maximum forward reference frame which is pointed by the B frame,” and fails to disclose how to solve the problem that the B frame cannot obtain the image reference block when it is out of the scope.

Moreover, AAPA does not disclose the step of “discriminating whether a reference frame corresponding to the motion vector is beyond a maximum forward reference frame which is pointed by the B frame.” The method of image encoding/decoding of digital video in the AAPA has the defect that the B frame cannot obtain the image reference block when it is out of the scope, which is exactly the problem that Claim 1 aims to solve.

Since there is neither specific evidence nor motivation to use the technical characteristic suggested by Kadono to solve the problem that the B frame cannot obtain the image reference block when it is out of the scope, it would not have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate AAPA teachings of the reference B-frame

into Kadono's reference frame, so as to solve the possible problem of un-matching motion vectors in a code mode of a fixed reference frame number and to guarantee the coding efficiency to the largest extent.

Therefore, Applicants submit that claim 1 is patentable over Kadono and AAPA and respectfully request withdrawal of the rejection of claim 1 under 35 U.S.C. 103. Claims 2-3 should also be allowed as a matter of law due to their dependency upon claim 1.

CONCLUSION

For at least the foregoing reasons, it is believed that all the pending claims 1-3 of the present application patently define over the cited art and are in proper condition for allowance. If the Examiner believes that a telephone conference would expedite the examination of the above-identified patent application, the Examiner is invited to call the undersigned.

Respectfully submitted,
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